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ABSTRACT

This digest discusses using scaffolding instruction to optimize student learning by providing a supportive environment while facilitating student independence. It begins by identifying the following eight essential elements of scaffolding instruction that teachers can use as general guidelines: (1) pre-engagement with the student and the curriculum; (2) establishing a shared goal; (3) actively diagnosing student needs and understandings; (4) providing tailored assistance; (5) maintaining pursuit of the goal; (6) giving feedback; (7) controlling for frustration and risk; and (8) assisting internalization, independence, and generalization to other contexts. Teachers are also urged to begin with what the students can do, help students achieve success quickly, help students to be like everyone else, know when it is time to stop, and help students to be independent when they have command of the activity. A framework for incorporating scaffolding throughout the lesson urges teachers to first model how to perform a new or difficult task, then work with students to perform the task, then have students work with a partner to complete the task, and finally, have individual students demonstrate their task mastery. The digest closes by discussing scaffolding challenges and cautions. (Contains 11 references.) (CR)

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USING SCAFFOLDED INSTRUCTION TO OPTIMIZE LEARNING

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BY
MARTHA LARKIN

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Using Scaffolded Instruction to Optimize Learning

Martha Larkin

Today's responsible learners are challenged to (a) know how to learn, (b) access changing information, (c) apply what is learned, and (d) address complex real-world problems in order to be successful. The ultimate academic goal is for students to become independent lifetime learners, so that they can continue to learn on their own or with limited support. Using scaffolded instruction optimizes student learning by providing a supportive environment while facilitating student independence.

Scaffolded Instruction Is. . .

The concept of scaffolding (Bruner, 1975) is based on the work of Vygotsky, who proposed that with an adult's assistance, children could accomplish tasks that they ordinarily could not perform independently. Scaffolded instruction is "the systematic sequencing of prompted content, materials, tasks, and teacher and peer support to optimize learning" (Dickson, Chard, & Simmons, 1993, p. 12). Scaffolding is a process in which students are given support until they can apply new skills and strategies independently (Rosenshine & Meister, 1992). When students are learning new or difficult tasks, they are given more assistance. As they begin to demonstrate task mastery, the assistance or support is decreased gradually in order to shift the responsibility for learning from the teacher to the students. Thus, as the students assume more responsibility for their learning, the teacher provides less support. For example, a young child or a child with physical disabilities likely would need assistance when learning how to use a playground slide (see Dixon, 1994). At first an adult might carry the child up the steps and slide with the child several times. Then some of the scaffolding or support would be removed when the adult placed the child on the lower portion of the slide and allowed him or her to slide with little guidance. The adult would continue to remove the scaffolding as the child demonstrated that he or she could slide longer distances successfully without support.

Scaffolding Guidelines

Scaffolding is one of the principles of effective instruction that enables teachers to accommodate individual student needs (Kame'enui, Carnine, Dixon, Simmons, & Coyne, 2002). Hogan and Pressley (1997) summarized the literature to identify eight essential elements of scaffolded instruction that teachers can use as general guidelines. Note that these elements do not have to occur in the sequence listed.

- ***Pre-engagement with the student and the curriculum.*** The teacher considers curriculum goals and the students' needs to select appropriate tasks.
- ***Establish a shared goal.*** The students may become more motivated and invested in the learning process when the teacher works with each student to plan instructional goals.
- ***Actively diagnose student needs and understandings.*** The teacher must be knowledgeable of content and sensitive to the students (e.g., aware of the students' background knowledge and misconceptions) to determine if they are making progress.
- ***Provide tailored assistance.*** This may include cueing or prompting, questioning, modeling, telling, or discussing. The teacher uses these as needed and adjusts them to meet the students' needs.
- ***Maintain pursuit of the goal.*** The teacher can ask questions and request clarification as well as offer praise and encouragement to help students remain focused on their goals.
- ***Give feedback.*** To help students learn to monitor their own progress, the teacher can summarize current progress and explicitly note behaviors that contributed to each student's success.
- ***Control for frustration and risk.*** The teacher can create an environment in which the students feel free to take risks with learning by encouraging them to try alternatives.
- ***Assist internalization, independence, and generalization to other contexts.*** This means that the teacher helps the students to be less dependent on the teacher's extrinsic signals to begin or complete a task and also provides the opportunity to practice the task in a variety of contexts.

Larkin (2001) interviewed and observed teachers who scaffolded instruction to help their students to become more independent learners. She found that these teachers regularly incorporated several of the eight essential elements of scaffolding into instruction. Other guidelines for effective scaffolding that these teachers shared included the following:

- ***Begin with what the students can do.*** Students need to be aware of their strengths and to feel good about tasks they can do with little or no assistance.
- ***Help students achieve success quickly.*** Although students need challenging work in order to learn, frustration and a "cycle of failure" may set in quickly if students do not experience frequent success.
- ***Help students to "be" like everyone else.*** Students want to be similar to and accepted by their peers. If given the opportunity and support, some students may work harder at tasks in order to appear more like their peers.

- ***Know when it is time to stop***. Practicing is important to help students remember and apply their knowledge, but too much may impede the learning. "Less is more" may be the rule when students have demonstrated that they can perform the task.
- ***Help students to be independent when they have command of the activity.*** Teachers need to watch for clues from their students that show when and how much teacher assistance is needed. Scaffolding should be removed gradually as students begin to demonstrate mastery and then no longer provided when students can perform the task independently.

Scaffolding Throughout The Lesson

In order to incorporate scaffolding throughout the lesson, teachers may find the framework outlined by Ellis & Larkin (1998) helpful.

- ***First the teacher does it.*** In other words, the teacher models how to perform a new or difficult task, such as how to use a graphic organizer. For example, the teacher may have a partially completed graphic organizer on an overhead transparency and "think aloud" as he or she describes how the graphic organizer illustrates the relationships among the information contained on it.
- ***Second, the class does it.*** The teacher and students work together to perform the task. For example, the students may suggest information to be added to the graphic organizer. As the teacher writes the suggestions on the transparency, students fill in their own copies of the organizer.
- ***Third, the group does it***. Students work with a partner or a small cooperative group to complete a graphic organizer (i.e., either a partially completed or a blank one).
- ***Fourth, the individual does it.*** This is the independent practice stage where individual students can demonstrate their task mastery (e.g., successfully completing a graphic organizer to demonstrate appropriate relationships among information) and receive the necessary practice to help them to perform the task automatically and quickly.

For additional scaffolding tips, teachers may want to view the videotape, *How to Scaffold Instruction for Student Success* (ASCD, 2002). See Beed, Hawkins, & Roller (1991) for examples of teacher—student dialogue during scaffolded instruction.

Scaffolding Challenges and Cautions

Although scaffolding can be used to optimize learning for all students, it is a very demanding form of instruction (Pressley, Hogan, Wharton-McDonald, Mistretta, & Ettenberger 1996). The following are some challenges and cautions for scaffolding instruction.

- ***Use scaffolding when appropriate.*** Keep in mind that all students may not need scaffolding for all tasks and materials. Provide scaffolding to those students who need it only when they need it.
- ***Be knowledgeable of the curriculum.*** This will enable you to determine the difficulty level of particular materials and tasks as well as the time and supports necessary to benefit students.
- ***Practice generating possible prompts to help students.*** The first prompt you give to a student may fail, so you may have to give another prompt or think of a different wording to help the student give an appropriate response.
- ***Be positive, patient, and caring.*** You may become discouraged if students do not respond or are not successful as a result of your initial scaffolding efforts. Continue to convey a positive tone of voice in a caring manner along with continued scaffolding efforts and student success soon may be evident.

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